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# **Historical institutional differences and entrepreneurship: the case of socialist legacy in Vietnam**

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## **Abstract**

We study the case of Vietnam to assess the long-lasting role of institutional and historical legacy on entrepreneurial outcomes. In particular, we investigate the detrimental effect of socialist institutions on entrepreneurship. Vietnam offers a unique quasi-experimental setting because the country was divided into the socialist North and the nonsocialist South for a relatively short period of two decades. After re-unification the South adopted the institutional framework conditions of the North. To assess the relationship between socialist history and entrepreneurship in this unique setting, we survey more than 3,000 North and South Vietnamese individuals more than four decades after the re-unification of the country. We find that North Vietnamese respondents have lower entrepreneurship intention, are less likely to select into entrepreneurship education programs, and are less willing to engage in business takeover. These patterns indicate the persistence of a long-lasting influence of historical differences in institutional framework conditions on entrepreneurship. The long-run effect of socialism on entrepreneurship is apparently deeper than previously discovered in the prominent case of Germany, where differences in institutional treatment lasted for much longer and ended more recently.

**Keywords:** Socialism; Vietnam; entrepreneurship intention; entrepreneurship education; takeover vs. new venture startup

**JEL:** D02; L26; M13; P30.

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## **1. Introduction**

Institutions influence entrepreneurship intentions and activity (e.g., Welter, 2011). Therefore, many countries create policy initiatives to establish entrepreneurship-facilitating institutional framework conditions (e.g., Fritsch et al., 2019). While it is relatively easy to influence factors such as barriers to entry in an entrepreneurship-friendly way (e.g., reducing the number of steps necessary to launch a venture), changing “soft” factors, such as the mentality, values, and attitudes toward entrepreneurship, is more challenging.

We study the case of Vietnam to test the role of institutional and historical legacy on entrepreneurial outcomes. Vietnam offers a unique quasi-experimental setting because the country was divided into the North and the South in 1955 and reunified in 1976. While the North turned into a socialist regime, the South trended toward the Western world. After the devastating Vietnam War (1955–1975), the country was reunited, and the South adopted the socialist institutional framework conditions of the North. Hence, the people in North Vietnam endured socialist treatment for approximately 20 years longer than did those in South Vietnam.

In recent decades, the regime has promoted market-oriented reforms that increase the scope for entrepreneurial activity. The changes in the formal framework conditions have been the same in North and South Vietnam (e.g., Tran, 2019). Prior to these changes, Vietnam’s economic and social policy was severely antientrepreneurial (e.g., Tran, 2019; Walder and Nguyen, 2008) and comparable to those of other socialist regimes (e.g., Earle and Sakova, 2000; Pickel, 1992; Wyrwich, 2013). Schwartz and Bardi (1997), for example, find that such policies imply the emergence of antientrepreneurial values among the exposed population. Hence, the approximately 20-year-longer socialist treatment among North Vietnamese people implies a less proentrepreneurial attitude relative to that of South Vietnamese people. A large body of the

literature argues that such mental dispositions can persist, despite changes in the formal institutional framework (e.g., Nunn, 2009; Stuetzer et al., 2016; Williamson, 2000).

To assess the relationship between socialist history and entrepreneurship in the unique setting of Vietnam, we survey more than 3,000 individuals in Vietnam. If formal framework conditions rather than informal institutions drive entrepreneurship, then North-South differences regarding entrepreneurship should have vanished soon after reunification and should not persist today (i.e., more than 40 years after reunification). However, we find that the difference in socialist treatment is still visible in a variety of entrepreneurial outcomes, even more than 40 years after the reunification of Vietnam in 1976 and the subsequent similarity in the institutional framework conditions of the North and South. In summary, North Vietnamese respondents are less likely to start a new venture in the next five years. Additionally, they are less likely to enroll in entrepreneurship education programs. Another interesting finding is that North Vietnamese respondents are also less willing to engage in succession and take over an existing business. Overall, these findings highlight the long-lasting influence of historical differences in institutional framework conditions on entrepreneurship.

Given the experimental conditions of our setting (i.e., the formal framework conditions are “fixed”), our findings suggest that informal institutions such as differences in attitudes and values toward economic behavior determine entrepreneurship. Another feature of our setting is that we focus on students who were born long after reunification and have therefore not been exposed to the period with different institutional treatment in the past. Thus, our experimental setting allows us to isolate the intergenerational transmission effect of mentality and attitudes. Furthermore, by focusing on students who are not yet integrated in the labor market, we can rule out that



unobserved labor market characteristics and the selection of people into certain occupations drive our findings. The same holds for external influences on socialization. Aldrich and Kim (2007) argue that this is accompanied by a higher chance that significant events over the life course disrupt the linked lives of children and parents. This, in turn, makes it likely that events outside the family context play a role in the entrepreneurial choices of the children of entrepreneurs.

We contribute to the literature in several ways. First, our study enhances the understanding of the long-term effects of socialism (e.g., Aidis et al., 2008; Alesina and Fuchs-Schuendeln, 2007; Wyrwich, 2013; Xu et al., 2014). In this regard, we also discuss the unique opportunities offered by the case of Vietnam for studying the role of historical legacies on entrepreneurial outcomes (e.g., Tran, 2019). To date, studies on the relationship between socialism and entrepreneurship have mostly focused on Europe. In Europe, socialist legacy in East Germany and Eastern Europe may explain the differences in entrepreneurship compared to Western Europe after the collapse of communism in 1989–1990. Vietnam was reunified in 1976 as a socialist country after a period of separation of only 21 years in which the North had been exposed to socialism but the South had not. Thus, the period of socialist treatment in Vietnam was much shorter than that in Europe, where socialism in the East lasted for approximately 40 years. Thus, the case of Vietnam provides information on whether socialist legacy still matters for entrepreneurial outcomes when the differences in exposure are relatively small and go further back in history. We also add to the literature on the institutional dimension of entrepreneurship education (e.g., Walter and Block, 2016) and on the intergenerational transmission of entrepreneurship (e.g., Chlosta et al., 2012; Laspita et al., 2012; Zellweger et al., 2011), which is an important antecedent for the emergence and persistence of entrepreneurship culture. Finally, we show whether and

how history contributes to explaining entrepreneurial phenomena in emerging economies (e.g., Chang and Wu, 2014; Santarelli and Tran, 2013; Tran, 2019).

Our findings have several practical implications. First, we document the long-lasting impact of institutional differences on entrepreneurship. The short-term-oriented policies for promoting entrepreneurship are unable to reverse long-term historical and institutional legacies. Instead, a long-term-oriented policy is required to overcome the long shadow of history. There are also implications for theory. The role of environmental context in entrepreneurial outcomes should be a central element to any practically relevant theory. Therefore, the role of context extends beyond general factors such as location factors, including industry and market structures or local demand conditions. The history of places also matters. Any theory ignoring historical legacies in entrepreneurial decision making is ill advised. Third, there are managerial implications. Owners of small firms with an entrepreneurial drive may find it difficult to attract talented people from regions with a history of inhibiting entrepreneurship, despite the fact that such people would be a great match based on their job skills. At the same time, the perspective of these employees could increase a company's diversity and development. In countries such as Vietnam but also for the whole of Eastern Europe (e.g., East vs. West Germany) and practically in all places with immigrants from former socialist countries, attracting talented people who have been exposed to an entrepreneurship-inhibiting environment is a major challenge that can be tackled by public-private programs (e.g., support for the presence of SMEs and entrepreneurs at career weeks in universities). In a similar vein, universities that aim to promote their third mission of technology transfer via entrepreneurship need to design their entrepreneurship programs in a way that also attracts students socialized in an entrepreneurship-inhibiting context. The findings on business succession are also interesting because they suggest that the prevalence of entrepreneurs is not sufficient to creating

persistent entrepreneurship or the emergence of an entrepreneurial culture that is self-perpetuating. Apparently, family role models in North Vietnam do not spur such a process to a large degree.

## **2. Theory, context, and hypotheses**

### **2.1 Theory and prior research**

#### **2.1.1 Institutions and entrepreneurship**

A large body of research has studied the role of institutions in entrepreneurship (e.g., Baumol, 1990; Elert et al., 2017; Sobel, 2008). Many studies have focused on the impact of *formal* framework conditions on entrepreneurship, which are typically understood as the formal “rules of the game” such as laws, regulations, and constitutions (e.g., North, 1990; 1994). A typical example of such rules affecting entrepreneurship is entry regulation (Djankov et al., 2002).

Interest in this type of research has increased because changes in formal conditions can be easily implemented by political action. However, despite policy changes and entrepreneurship-promotion programs, mounting empirical evidence suggests persistent place-based differences with respect to entrepreneurial activity. These differences are partially grounded in regional differences in mentality and entrepreneurial attitudes, which are related to the societal approval of entrepreneurship (e.g., Fritsch et al., 2019; Glaeser et al., 2015; Stuetzer et al., 2016). The societal approval of entrepreneurship is a typical example of an *informal* (“soft”) institution, which comprises norms, conventions, codes of behavior, and the conduct of society (e.g., North, 1990, 1994). The finding that formal institutional changes do not reverse or cancel out the influence of historically determined informal institutions on entrepreneurship has created an increased research interest in the latter (e.g., Boettke and Coyne, 2009,

Elert et al., 2017). The available evidence suggests that there are long-lasting place-based differences in the approval of entrepreneurship or the “social legitimacy of entrepreneurship” (Etzioni, 1987).

Role models play an important role in establishing the social legitimacy of entrepreneurship (for a vivid conceptualization of this process, see Andersson and Koster, 2011). These mechanisms are also antecedents of well-established conceptual approaches to harnessing entrepreneurship, such as entrepreneurial culture (e.g., Beugelsdijk, 2007; Huggins and Thompson, 2017; Fritsch and Wyrwich, 2017), entrepreneurial ecosystems (e.g., Acs et al., 2014; Stam, 2015; Spigel, 2017), entrepreneurial capital (Audretsch and Keilbach, 2004), and social capital (Westlund and Bolton, 2003). All approaches have in common that there is a local “entrepreneurial climate” that stimulates entrepreneurship. Altogether, the informal approval of entrepreneurship is an important building block of this entrepreneurial climate.

### **2.1.2 Socialism and entrepreneurship**

The introduction of socialism in a country entails both formal and informal institutional ramifications. For example, socialism typically includes the establishment of anti-entrepreneurial formal institutions that trigger low informal approval of entrepreneurship over time. Schwartz and Bardi (1997) describe how socialism crowds out a value orientation for autonomy, which is crucial for entrepreneurship (e.g., Taylor, 1996; Van Gelderen and Jansen, 2006). Additionally, socialism is associated with negative informal values toward private business, a lack of property rights enforcement, an exploiting government inference, and corruption with negative consequences for the development of the private sector (e.g., Aidis et al., 2008; Puffer and McCarthy, 2001; Shleifer and Vishny, 1999). As a result, a negative link between socialist heritage

and entrepreneurship is well documented in a variety of countries (e.g., Aidis et al., 2008; Alesina and Fuchs-Schuendeln, 2007; Wyrwich, 2013).

Based on the available theory and evidence, we conclude that the origin of the institutional approval of entrepreneurship is place-specific. Additionally, low regional institutional approval due to historical development should negatively impact the entrepreneurship intentions of respondents socialized in these places compared to respondents from areas with higher institutional approval of entrepreneurship.

We will focus on the second conclusion in the empirical part of the paper by examining a case where a “natural historical experiment” shaped approval of entrepreneurship differently across regions while the supra-regional formal institutional framework today is the same in both regions. Our examination starts with a careful description of the historical development of our case (i.e., Vietnam).

## **2.2 Context: Vietnam**

Following Vietnam’s initial division after the First Indochina War in 1954, two socio-economic systems began operating side by side. In the North, the ‘Democratic Republic of Vietnam’ was under socialist rule and followed the models of the Soviet Union and China. In the South, the nonsocialist ‘Republic of Vietnam’ was supported by the US and influenced by prior French colonial rule. After the socialist North won the devastating Vietnam War (1955–1975), Vietnam was reunified under socialist rule in 1976. The newly established ‘Socialist Republic of Vietnam’, which still persists today, is ruled by the Communist Party of Vietnam (CPV) and initially utilized a central planning system. Hence, the formerly nonsocialist South adopted the institutional framework conditions of the socialist North in 1976, in contrast to other settings such as Germany, which was reunified under nonsocialist rule (e.g., Wyrwich, 2013).

From 1976 to 1986, the now socialist Vietnam was characterized by a governmental focus on the development of heavy industry and agriculture. Vietnam was dominated by state-owned enterprises (SOEs), and the private sector was almost nonexistent (Han and Baumgarte, 2000). In 1986, Vietnam began to transition from a planned economy to a market economy with the introduction of the Doi Moi (“renovation”) reforms. In contrast to other planned economies, Vietnam’s transition process was gradual and characterized by a wait-and-see approach (e.g., Tran, 2019; Walder and Nguyen, 2008). Instead of abruptly privatizing SOEs, Vietnam prompted SOEs to begin operating under market conditions to increase their efficiency and ensure their survival (Tran, 2019). In the following years, Vietnam gradually reduced the privileged treatment of SOEs and began to dissolve them. As part of this transition, private ownership was allowed. The introduction of an “Enterprise Law” in 2000 was a crucial enabler of entrepreneurship in Vietnam, which had previously been prohibited. Since then, the number of private enterprises has increased significantly, from 400 in 2000 to more than 250,000 in 2010 (Tran, 2019).

Today, the Communist Party of Vietnam (CPV) labels Vietnam as a “socialist-oriented market economy”. Economically, Vietnam has almost fully transitioned to a market economy. Foreign trade and the labor market are fully liberalized, SOEs are partly privatized, private enterprises are an important contributor to the Vietnamese economy, and Vietnam is a member of the WTO (Tran, 2019). Politically, however, Vietnam is still socialist. The CPV is the sole political actor and maintains a unitary government with centralized control, and socialism is the official political ideology. This is also reflected in the education system, where political subjects are compulsory courses (e.g., Marxist-Leninist philosophy and Marxist political economics) that students have to pass prior to graduating.

Vietnam's transition process shares many features with that of China, where market reforms began in 1982 (e.g., Tran, 2019; Walder and Nguyen, 2008). In contrast to other transition economies, both countries were relatively successful in transitioning to market-based economies, as evidenced by steady GDP growth (Tran, 2019). Both countries stand out with regard to the continuity of their political institutions. However, a distinct difference is China's focus on attracting multinational companies, while Vietnam's transition was backed by the rise of local, private companies (e.g., Tran, 2019; Walder and Nguyen, 2008). While SOEs continue to be flagships of China's economy, entrepreneurial ventures play a crucial role in Vietnam's transition to a market economy (Nguyen and Rose, 2009).

Given Vietnam's historical diversity regarding the influence of socialism, Vietnam offers a unique quasi-experimental setting that allows us to explore the influence of socialist heritage in a nuanced way. Various studies have assessed the effect of socialism on entrepreneurship intentions and attitudes based on the case of Germany (e.g., Bauernschuster et al., 2012; Lechner and Pfeiffer, 1993). Germany was divided for 40 years into the nonsocialist West and the socialist East. After Germany's reunification in 1990, the same formal institutional framework became effective in both parts of the country. Studies have documented the persistence of East-West differences regarding entrepreneurship more than two decades after reunification (e.g., Wyrwich, 2013). In our Vietnamese setting, the (different) exposure to socialism only endured for 21 years, and reunification had already taken place in 1976. In contrast to Germany, this allows us to test the effect of a significantly shorter treatment intensity. Since the reunification was 15 years earlier than that in Germany, we can also investigate a larger temporal distance to the treatment with the current data. Put differently, the case of Vietnam is more "extreme" than those of other countries, and finding a socialist treatment effect under these conditions suggests that socialist legacy can endure much

longer than we know from previous research, despite much shorter treatments compared to that in previous research.

## **2.3 Hypotheses: socialist heritage and entrepreneurship in Vietnam**

### **2.3.1 Socialist heritage and entrepreneurship intentions**

Various conceptual approaches explain how the informal societal approval of entrepreneurship shapes an individual's entrepreneurship intentions and, ultimately, his/her entrepreneurial activity.

The role model approach (e.g., Andersson and Larsson, 2016; Bosma et al. 2012; Chlosta et al. 2012; Kacperczyk, 2013; Minniti 2005; Nanda and Sorenson 2010; Sorenson, 2017) argues that entrepreneurship intentions emerge via social interaction with entrepreneurs at the local or micro level. Social interaction with entrepreneurs implies learning about entrepreneurial tasks through demonstration and peer effects. Consequently, if there are only a few entrepreneurs in the local environment because of low institutional approval, the capacity of entrepreneurial role models to unfold and promote entrepreneurship intentions is also low. Additionally, low institutional approval may also decrease the “willingness” of individuals to socially interact with or learn from existing entrepreneurs. Low approval may also reduce demonstration and peer effects. In this regard, Wyrwich et al. (2016) show that knowing an entrepreneur has a lower impact on promoting entrepreneurial attitudes among respondents who have been exposed to socialism, one of the most entrepreneurship-hostile economic systems in history (Earle and Sakova, 2000).

North Vietnam has been under socialist rule since 1955, while South Vietnam became socialist in 1976. In essence, the socialist treatment in North Vietnam lasted 21 years longer than that in the South. Since exposure to socialist ideology negatively affects entrepreneurship intentions, people from South Vietnam should have higher



entrepreneurship intentions relative to people from the North. We expect these differences to persist beyond the generation of people who directly experienced the period prior to 1976. If this is true, people born after 1976 but who were raised and socialized in either North or South Vietnam should be different with respect to their perception of entrepreneurship and entrepreneurship intentions.

**H1:** *Individuals from North Vietnam have lower entrepreneurship intentions than individuals from South Vietnam.*

### **2.3.2 Socialist heritage and entrepreneurship education**

Another crucial pillar of entrepreneurship is entrepreneurship education. In the hopes of fostering entrepreneurship, policy makers frequently invest in entrepreneurship education at the university level (e.g., Brush et al., 2003; Katz, 2003). Studies indeed have suggested that entrepreneurship education is able to foster entrepreneurial activity (e.g., Kautonen et al., 2015; Rauch and Hulsink, 2014). Walter and Block (2016) find that the positive relationship between entrepreneurship education and the subsequent entrepreneurial activity of entrepreneurship education is particularly pronounced in entrepreneurship-hostile institutional environments.

While these studies have focused on the effect of entrepreneurship education on entrepreneurship, we argue that there is a selection effect involved. If people from North Vietnam have lower entrepreneurial intentions due to their socialization as hypothesized in the previous section, they should also reveal a lower willingness to learn about entrepreneurship. Therefore, we expect individuals in North Vietnam to engage less often in entrepreneurship courses than their South Vietnam counterparts.

**H2:** *Individuals from North Vietnam are less likely to participate in entrepreneurship education programs than are individuals from South Vietnam.*

### **2.3.3 Socialist heritage and the intergenerational transmission of entrepreneurship**

In addition to the role model approach, the vast literature on the intergenerational transmission of entrepreneurship is helpful for understanding the persistent effect of the informal institutional approval of entrepreneurship and the formation of entrepreneurship intentions. (e.g., Chlosta et al. 2012; Laspita et al., 2012; Lindqvist et al., 2015; Wyrwich, 2015).

Parents can influence their children via certain parenting practices and by transmitting their value orientation (e.g., Aldrich and Kim 2007; Dohmen et al. 2012). Furthermore, children observe their parents' entrepreneurial behavior and their day-to-day business activity. These mechanisms foster the internalization of the norms of entrepreneurial behavior that are conducive to the development of a preference for entrepreneurial behavior.

The parental transmission of values is part of the socialization process. This idea is also guided by approaches that demonstrate the role of family socialization in the transmission of norms and values (e.g., Bisin and Verdier, 2000, 2001; Doepke and Zilibotti, 2008; Tabellini, 2008). We understand values as "...deeply held convictions about religious or moral principles or beliefs about the long-run consequences of alternative patterns of behavior that likely apply to everyone", which are crucial for preference formation (Tabellini, 2008, 918). In the approach of Bisin and Verdier (2000, 2001), for example, parents experience an increase in utility when they can increase the wellbeing of their offspring. This is referred to as paternalistic altruism. Parents can exert socialization effort (e.g., spending time with their children), with one purpose of doing so being their desire to instill in their children their own values, based on the assumption that their value system is the best one for their children, which is referred to as imperfect empathy. The authors also argue that nonfamily socialization

occurs in the local environment. Hence, overall socialization is affected by family and local influences.

Against this background, we assume that entrepreneurial parents (or close family members) in regions with a low institutional approval of entrepreneurship are willing to transmit their value orientation to their offspring. However, the environmental context may imply that their emphasis on transmitting the entrepreneurial components of their value profile is lower. For example, if they experience resistance toward their own activity, then this may discourage their effort to instill entrepreneurial preference among their children to spare them the same experience in the future. Even if this is not taking place, a low institutional approval of entrepreneurship in the local environment may offset parental efforts to instill entrepreneurial experiences in their children. As mentioned above, not only parents but also other local role models influence the entrepreneurial decision making of individuals. If the social acceptance of entrepreneurship and the number of entrepreneurial peers in the local environment are low, then parental efforts might be thwarted. Therefore, the local environment is not complementary to parents' efforts but rather in conflict with social standards regarding entrepreneurship.

A low institutional approval of entrepreneurship may imply that children of entrepreneurs also show a lower willingness to learn about entrepreneurial task profiles from their parents. It was argued above that people exposed to socialist regimes show a lower willingness to develop and learn entrepreneurial skills (see also Wyrwich et al., 2016). Altogether, we expect that people in regions with a low institutional approval of entrepreneurship also reveal a lower willingness to run a venture when their parents are self-employed compared to people with role models in their environment in areas with higher institutional approval. The same applies to business succession, and the arguments are similar. Therefore, we hypothesize the following:

**H3a:** *Individuals from North Vietnam who are exposed to the entrepreneurial experiences of their parents or close family members have a lower willingness to start new ventures than individuals from South Vietnam with such experience.*

**H3b:** *Individuals from North Vietnam who are exposed to the entrepreneurial experiences of their parents or close family members have a lower willingness to engage in business succession than individuals from South Vietnam with such experience.*

### **3. Data and variables**

#### **3.1 Survey design and data collection**

We developed a paper-based survey to collect primary data on the effect of socialist legacy on entrepreneurial outcomes in Vietnam.

Since we are primarily interested in younger individuals who have not been directly exposed to socialism, students serve as our target population. While the use of student samples is often criticized, they can be appropriate under certain circumstances. In particular, prior research has indicated that student samples are particularly useful and adequate when studying entrepreneurship intentions (e.g., Hsu et al., 2019; Hsu et al., 2017; Krueger et al., 2000). This is because experienced entrepreneurs have already transformed their entrepreneurship intent to actual behavior, which makes it difficult to assess the impact on intentions in retrospect (Liñán and Chen, 2009). In addition, starting or taking over a business is a realistic and relevant option for students, which is crucial for the validity of the results (Zellweger et al., 2011).

The questionnaire was developed in English and then professionally translated into Vietnamese. Before entering the field, we conducted a pretest with 24 Vietnamese students (including 12 Ph.D. students) and a Vietnamese entrepreneurship scholar. In the pretest, we collected and incorporated an extensive amount of feedback on all aspects of the survey.

We conducted the survey at Vietnamese universities in September and October 2018. A total of 3,557 students from 21 universities throughout Vietnam participated in the survey. The 21 universities include some of the country's largest institutions, such as the University of Economics Ho Chi Minh City, Vietnam National University (Hanoi), and Hanoi University of Science and Technology. Ten universities were located in the North, and 11 universities were located in the South of Vietnam. A detailed breakdown of the universities and the respondents per university is provided in the Appendix (Table A1).

We excluded participants who were not Vietnamese, participants with missing values for variables of interest, and participants who did not indicate clear career choice intentions (e.g., Walter and Block, 2016; Zellweger et al., 2011). Our final sample comprised 3,010 respondents.

## **3.2 Variables**

### **3.2.1 Dependent variables**

To capture respondents' career choice intentions, we follow Zellweger et al. (2011) and use the intention scale employed in the "global university entrepreneurial spirits students' survey" (GUESSS). This established scale was specifically developed to capture the career choice intentions of students in a nuanced way. Based on the question "Which career path do you intend to pursue five years after the completion of stud-

ies?”, respondents can choose among the responses of (1) employee, (2) founder entrepreneur, (3) successor, and (4) others (e.g., “no professional career” and “do not know”). In line with the prior research, we exclude individuals who answered (4) ‘others’ because they do not have a clear career intention (e.g., Walter and Block, 2016; Zellweger et al., 2011). Similar to Zellweger et al. (2011), we use a time lag of five years because entrepreneurs often work in a different company before starting or taking over their own business (Brockhaus and Horwitz, 1986).

We derive two dependent variables from this question. First, we create a dummy variable (*‘entrepreneurship intention’*) that takes a value of 1 if the respondent intends to pursue a career as a (2) founder entrepreneur or (3) successor and 0 if the respondent intends to pursue a career as an (1) employee. Second, among the individuals with entrepreneurship intentions, we capture respondents’ preference to take over an existing business vs. creating a new startup (*‘new venture startup vs. business takeover’*). The dummy variable takes a value of 1 if the respondent intends to pursue a career as a (3) successor and 0 if the respondent intends to pursue a career as a (2) founder entrepreneur.

As a third dependent variable, we capture whether respondents received some form of entrepreneurship education during their studies via the following question: “have you ever taken a course or workshop related to entrepreneurship during your studies?” The dummy variable *‘entrepreneurship course’* is coded 1 for yes and 0 for no. The question is derived from the European Commission’s Flash Eurobarometer (No. 354), “Entrepreneurship in the EU and Beyond”, which has frequently been used in prior entrepreneurship research (e.g., Block et al., 2019; Gohmann, 2012).

### **3.2.2 Independent variable**

To capture the impact of socialist legacy on entrepreneurial outcomes, we asked respondents to indicate whether they were born and grew up<sup>1</sup> in North Vietnam (socialist) or South Vietnam (nonsocialist). The dummy variable '*Origin: North Vietnam*' takes a value of 1 for respondents from North Vietnam and a value of 0 for respondents from South Vietnam.

### **3.2.3 Control variables**

We control for a range standard of sociodemographic characteristics that shape entrepreneurial outcomes. These include age, gender, marital status, nationality, ethnicity, religion, level of studies, field of studies, and years of studies. All variables and their definitions are summarized in Table 1.

To capture respondents' risk attitudes, we asked them to state their willingness to take a risk on a ten-point scale ranging from 0 ("highly risk-averse") to 10 ("fully prepared to take a risk"). This question is adapted from Block et al. (2015). Finally, we collect information on respondents' family background, which is associated with the intergenerational transmission of socialist values in prior entrepreneurship research (Wyrwich, 2015). As such, we control for whether respondents' father, mother, or other close family members were or are currently self-employed.

*- Please insert Table 1 around here -*

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<sup>1</sup> We asked respondents to separately indicate (1) where they were born and (2) where they grew up. All of the respondents that were born in the North (South) also grew up in the North (South).

## **4. Results**

### **4.1 Descriptive statistics and univariate analysis**

Table 1 displays descriptive statistics and compares the mean values of individuals born and raised in North Vietnam (socialist) and South Vietnam (formerly nonsocialist). Our North-South distribution is balanced: out of the 3,010 individuals in our sample, 1,466 were born and raised in North Vietnam (49%) and 1,544 were born and raised in South Vietnam (51%).

#### **4.1.1 Dependent variables**

Regarding respondents' career choice intentions, 55% of respondents intend to pursue a career as an entrepreneur (i.e., founder or successor) five years after the completion of their studies. In contrast, 45% of respondents intend to work as employees. Among the 1,656 with entrepreneurship intentions, 7% of respondents intend to engage in business succession, while 93% intend to start a new venture. Significant differences exist between North and South Vietnamese: While 59% of South Vietnamese respondents have entrepreneurship intentions, only 51% of North Vietnamese respondents do. In general, the descriptive statistics show that North Vietnamese respondents seem to perceive a career as an employee as more attractive than do South Vietnamese respondents.

In addition, 60% of our respondents indicated that they participated in a course at a university that was related to entrepreneurship. Again, the ratio is notably higher in the South (64%) than in the North (55%).

Finally, among the respondents with entrepreneurship intentions ( $N = 1,656$ ), the intention to takeover an existing business (vs. founding a new venture startup) is also less pronounced in the North: 5% of respondents from the North intend to engage in business succession, in contrast to 8% in the South.



Overall, the North-South differences in the dependent variables (*entrepreneurship intention, entrepreneurship course, and startup vs. takeover*) are statistically significant ( $p < .05$ ). The results indicate a higher interest in entrepreneurship among respondents from South Vietnam than among those from North Vietnam and simultaneously provide the first evidence of a negative impact of a more pronounced socialist history.

#### **4.1.2 Control variables**

Our respondents are 20 years old on average and mostly female (56%). Ninety-five percent of our respondents are Kinh, which is the main ethnicity in Vietnam. While no major North-South differences exist regarding gender and ethnicity, respondents from the North less often have a religious affiliation. Overall, 87% of respondents with North Vietnamese origin have no religious affiliation, in contrast to 65% of respondents from the South. Since antireligion is a central tenet in socialism (Barro and McCleary, 2005), this finding may be a further outcome of the enduring socialist rule in North Vietnam.

The majority of our respondents study law or economics (46%), which partially explains the high number of students who had already taken entrepreneurship courses. The second-largest field of study is computer sciences (21%). On average, our respondents studied for 14 years (the typical number of school years before attending a university is 12 in Vietnam).

While no significant differences exist regarding respondents' willingness to take risks, 49% of respondents have self-employed parents or close family members. Interestingly, this value does not significantly differ between the South (50%) and the North (49%).

## 4.2 Main analyses

We perform multiple regression analyses to assess the impact of a North Vietnamese origin on different entrepreneurial outcomes. The main results regarding our hypotheses are displayed in Table 3, which shows logit coefficients with robust standard errors in parentheses. Table 2 provides a correlation matrix and variance inflation factors, which indicate that our main results do not suffer from multicollinearity problems.

- Please insert Tables 2 and 3 around here -

Model (1) of Table 3 focuses on H1 and uses '*entrepreneurship intention*' as the dependent variable. The analysis compares individuals with entrepreneurship intentions (i.e., as a founder entrepreneur or successor) to individuals who intend to pursue a career as an employee. Since the dependent variable is dichotomous, we employ a logistic regression. The analysis considers the full sample of 3,010 individuals. Model (1a) only includes the independent variable '*Origin: North Vietnam*' and shows a negative and highly significant ( $p < .01$ ) effect of a North Vietnamese origin on entrepreneurship intentions. The highly significant effect persists when the control variables are entered into Model (1b) ( $p < .01$ ). This finding supports H1 and shows that entrepreneurship intentions in North Vietnam continue to be significantly lower than those in the formerly nonsocialist South Vietnam.

Model (2) of Table 3 focuses on an individual's selection into entrepreneurship education (H2) and uses '*entrepreneurship course*' as the dependent variable. Since the dependent variable is dichotomous, we use a logistic regression. Model (2) considers the full sample of 3,010 individuals. Model (2a) only includes the independent variable '*Origin: North Vietnam*' and shows a negative and highly significant ( $p < .01$ )

effect of a North Vietnamese origin on the likelihood of participating in an entrepreneurship-related course at a university. The effect persists when the control variables are entered into Model (2b). This finding supports H2, which argues that respondents from North Vietnam are less likely to enroll in entrepreneurship-related activities, such as entrepreneurship education.

Finally, Model (3) of Table 3 focuses on H3 and uses '*new venture startup vs. business takeover*' as the dependent variable. Research on an individual's mode of entry into entrepreneurship (e.g., new venture startup vs. business succession) often distinguishes individuals from business-owning families and individuals from non-business-owning families since the possibility of engaging in business succession depends on the availability of a business in the family environment (e.g., Parker and Van Praag, 2012). In this analysis, we therefore only consider those respondents who have a close family member that is self-employed. This reduces our sample from 3,010 to 1,489 respondents. For testing H3, the sample restriction is not critical because we refer to a comparison between North and South Vietnamese with entrepreneurship experience among family members.

We estimate a multinomial logit model with three career choice outcomes: (1) employee (baseline), (2) new venture startup (founder entrepreneur), and (3) business takeover (succession). In line with our hypotheses, the results show that the North Vietnamese respondents have a significantly lower intention to start a new venture (Model 3a,  $p < .01$ ) and to engage in business succession and take over an existing venture (Model 3b,  $p < .01$ ) than do South Vietnamese respondents. Further, the results indicate that the aversion of business succession seems to be more pronounced than the aversion of new venture startup. As such, business takeover seems to be particularly unattractive to respondents from North Vietnam.

### 4.3 Further analyses and robustness checks

Our main analysis suggests that business takeover seems to be more unattractive to our respondents than new venture start-up. To assess this finding in more detail, we perform a subsample analysis that only considers individuals with entrepreneurship intentions and excludes individuals who intend to pursue a career in wage employment ( $N = 1,656$ ). Hence, the dependent variable '*new venture startup vs. business takeover*' takes a value of 1 if the respondent intends to takeover an existing business and 0 if the respondent intends to start a new venture startup. The results are reported in Model 1 of Table 4. Model (1a) shows a negative relationship ( $p < .05$ ). The negative effect persists when the control variables are entered into Model (1b) but slightly loses significance ( $p < .10$ ). Overall, these results suggest that North Vietnamese respondents have a particular aversion to business succession.

The possibility of succeeding in a business usually depends on whether close family members own a business. Extending Model (1), we thus reduce our sample to individuals (a) with entrepreneurship intentions and (b) with close family members who are self-employed ( $N = 892$ ). The results of this subsample analysis are displayed in Model (2). The results show that the negative association between a North Vietnamese origin and business succession persists even when only individuals with close family members in self-employment are considered. The effect is significant (Model 2a,  $p < .05$ ) and persists when all control variables are entered (Model 2b,  $p < .05$ ). This result further underlines the pronounced aversion to business succession among respondents from North Vietnam.

Our main analysis uses a sample of individuals who have close family members who are self-employed. As a further robustness check, we reestimate Model (3) of Table 3 using the full sample (i.e., including respondents who have no self-employed members in their close family). The results reported in Model (3) of Table 4 underline

the robustness of the main results. The negative associations between a North Vietnamese origin and new venture startup as well as business takeover persist. Again, the negative effect is more pronounced in the case of business takeover.

Finally, our arguments and previous findings suggest that an interaction effect exists between origin (i.e., North Vietnam) and family environment (i.e., close family members are self-employed). As a second robustness check on H3, we reestimate our main analyses and include also respondents without entrepreneurship experience among family members. We introduce an interaction term between '*Origin: North Vietnam*' and '*close family member who is self-employed*'. Since both variables are dummy variables, we construct a new set of variables that capture all possible combinations of the variables. The results are reported in Model (3) of Table 4. The reference category comprises individuals from South Vietnam who do not have any close family members who are self-employed. Compared to this reference category, individuals from South Vietnam with self-employed family members have entrepreneurship intentions that are significantly higher than those of individuals from North Vietnam. Furthermore, the results show that North Vietnamese respondents without close family members in self-employment have significantly lower entrepreneurship intentions than that of South Vietnamese respondents. This effect supports our main results and indicates that the positive effect of the family environment on entrepreneurship intentions is significantly larger in South Vietnam.

## **5. Discussion and conclusions**

### **5.1 Discussion**

We document the long-lasting influence of historical differences in institutional framework conditions on entrepreneurship. To the best of our knowledge, we are the

first to make use of the quasi-natural experiment of Vietnam. While the Vietnamese setting is similar to the German case that has been heavily studied in the past (e.g., Wyrwich, 2013), important differences exist.

In Germany, both parts of the country reunited after four decades of separation, at which time Eastern Germany was exposed to socialism. There is evidence that exposure to socialism negatively impacts entrepreneurship in Eastern Germany (e.g., Bauernschuster et al., 2012; Wyrwich, 2013). The Vietnamese setting differs because it reflects a reverse situation. Here, the North and South reunited with the socialist institutional framework conditions being introduced in the South. In Germany, the framework conditions of the West-German-type market economy prevailed in the formerly socialist East. Our reverse setting is a testbed to assess whether the effect of socialism on entrepreneurship is specific to Germany and its specific form of reunification. Thus, we provide evidence of an effect of socialism on entrepreneurship beyond the German context and beyond the context of Eastern vs. Western Europe.

Furthermore, the period of differences in exposure is much shorter in Vietnam (two decades) compared to that in Germany (four decades) and that in Western and Eastern Europe (seven decades when considering former Soviet Union countries). Hence, our setting allows for testing whether even a “small” difference in socialist exposure can have a long-run impact on entrepreneurship. Our evidence suggests that two decades of different exposure to socialism have led to pronounced differences in entrepreneurship more than 40 years later. This pattern also suggests that the effect of socialism and institutions more generally works through the intergenerational transmission of values since our respondents were not born when the differential institutional treatment of North and South Vietnam ended in the mid-1970s. It is even very likely that many parents of our study group were born after the reunification of Vietnam. In Germany, studying legacy effects is only possible for a period of up to 25

years, with most respondents at least partly socialized in the formerly socialist East Germany.

*- Please insert Table 4 -*

## **5.2 Contributions**

We contribute to the literature in several ways. First, we show that differences in exposure to socialism affect entrepreneurship beyond the cultural context of Germany and Eastern Europe, and we show that even small differences in socialist treatment intensity can have long-run effects on entrepreneurial outcomes. These insights enhance our understanding of the role of institutions in entrepreneurship and socialism in particular (e.g., Aidis et al., 2008; Alesina and Fuchs-Schuendeln, 2007; Wyrwich, 2013; Xu et al., 2014).

Second, we contribute to the entrepreneurship education literature by highlighting the role of external framework conditions on enrollment in entrepreneurship programs. Thus, our results suggest that entrepreneurship education is influenced by institutions not only regarding its effectiveness (e.g., Walter and Block, 2016) but also in regard to the question of who participates in entrepreneurship education in the first place.

Third, we contribute to the literature on entrepreneurship in emerging economies (e.g., Chang and Wu, 2014; Santarelli and Tran, 2013; Tran, 2019). More precisely, we show how history and socioeconomic legacies still impact entrepreneurial development. This finding also contributes to the emerging literature that focuses on the past to understand entrepreneurial phenomena (e.g., Wadhvani and Lubinski, 2017).

Finally, our paper also contributes to the literature on the emergence and persistence of entrepreneurial culture via intergenerational transmission. This transmission is assumed to be a main mechanism for the self-perpetuation of entrepreneurship (e.g., Fritsch and Wyrwich, 2019). However, our results show that individuals with self-employed parents or close family members have lower start-up and business take-over intentions if their families are exposed to antientrepreneurial institutions for a longer time. Thus, the emergence of an entrepreneurial culture is hampered by such historical legacies.

### **5.3 Practical implications**

We find that students from North Vietnam enroll in entrepreneurship courses less often than students from South Vietnam, which we attribute to North Vietnam's entrepreneurship-hostile environment. This finding has as an important practical implication since prior research shows that entrepreneurship education (e.g., participation in entrepreneurship-related courses) has a particularly strong effect in entrepreneurship-hostile environments (Walter and Block, 2016). Hence, if students do not sign up for an entrepreneurship course in entrepreneurship-hostile environments, the positive effect of entrepreneurship education cannot unfold. Thus, university administrators or policy makers from formerly socialist countries interested in fostering entrepreneurial activity should consider making entrepreneurship education a compulsory element of university education. At the same time, individuals who actually participate in entrepreneurship courses, especially in hostile environments where they face resistance for their decision to engage in entrepreneurship education and activity, may be characterized by a high interest in entrepreneurship, which is then manifested in higher entrepreneurial activity.



Another practical implication stems from our finding on business takeover or family succession as a career option. We find that students in North Vietnam are less interested in taking over an established business than founding a new venture, which can lead to a situation in which successful businesses do not find a successor. This has negative implications for the development of a healthy family business sector and the country's economic development. Prior research has shown that family firms constitute an important part of many economies around the world (e.g., Andersson et al., 2018; Carney et al., 2017) and can contribute positively to job stability (e.g., Bjuggren, 2015; Neckebrouck et al., 2018) and national competitiveness (Carney et al., 2017). Policy makers and higher education administrators in (formerly) socialist countries should consider improving the image of family businesses and setting up specific courses to motivate and prepare potential family business successors.

#### **5.4 Limitations and avenues for future research**

We focus on entrepreneurship intentions as our dependent variable. The theory of planned behavior assumes that intentions are generally a good predictor of actual behavior. However, prior research has shown that entrepreneurship intentions do not always translate into actual entrepreneurial actions, which is known as the intention-action gap (e.g., Kautonen et al., 2015; Van Gelderen et al., 2015). An intention-action gap exists in entrepreneurship because several internal and external factors shape individuals' final decisions to engage in entrepreneurship. In formerly socialist countries such as Vietnam, external factors might still be prevalent and ultimately prohibit individuals from translating their high intentions into actual behavior. This intention-action gap potentially limits the generalizability of our results beyond the construct of entrepreneurship intentions. Building on this finding, future studies could use a similar setting to study entrepreneurial action against the background of socialist history.

Additionally, future research could draw on longitudinal designs to assess whether and how students turn their intentions into entrepreneurial actions in such a setting (e.g., Van Gelderen et al., 2015).

Relatedly, we focus on students as our target population because we are primarily interested in younger individuals that were not directly exposed to socialism. Prior research indicates that student samples can be particularly useful and adequate when studying entrepreneurship intentions (Hsu et al., 2019; Hsu et al., 2017; Krueger et al., 2000). Still, the external validity of student samples can be criticized. As such, it would be interesting to reassess our findings using different samples, such as employees or actual entrepreneurs.

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## Tables

**Table 1.** Description of variables and descriptive statistics

| Variable                    | Definition  | N     | Mean  | SD   | Min. | Max. | North<br>(socialist)<br>(N = 1,544) | South<br>(formerly<br>non-social-<br>ist)<br>(N = 1,466) | Diff<br>(t-test) |
|-----------------------------|---|-------|-------|------|------|------|-------------------------------------|--|------------------|
| <i>Independent variable</i> |   |       |       |      |      |      |                                     |  |                  |
| Origin: North Vietnam       | Dummy, 1 if the respondent was born and grew up in North Vietnam, 0 otherwise (South Vietnam).  | 3,010 | 0.49  | -    | 0    | 1    | -                                   | -  | -                |
| <i>Dependent variables</i>  |   |       |       |      |      |      |                                     |  |                  |
| Entrepreneurship intention  | Dummy, 1 if the respondent intends to pursue a career as an entrepreneur (founder or successor) five years after the completion of studies, 0 otherwise (employee). | 3,010 | 0.55  | -    | 0    | 1    | 0.51                                | 0.59   | -0.08***         |
| Entrepreneurship course     | Dummy, 1 if the respondent has ever taken a course or workshop related to entrepreneurship during their studies, and 0 otherwise.                                   | 3,010 | 0.60  | -    | 0    | 1    | 0.55                                | 0.64   | -0.09***         |
| Startup vs. takeover        | Dummy, 1 if the respondent intends to takeover an existing business, and 0 the respondent intends to found a new venture startups.                                  | 1,656 | 0.07  | -    | 0    | 1    | 0.05                                | 0.08   | -0.03**          |
| <i>Controls</i>             |   |       |       |      |      |      |                                     |  |                  |
| Age                         | Respondent's age.   | 3,010 | 20.40 | 1.15 | 18   | 25   | 20.44                               | 20.34  | 0.09**           |
| Gender                      | Dummy, 1 if the respondent is male, 0 otherwise.  | 3,010 | 0.44  | -    | 0    | 1    | 0.42                                | 0.45   | 0.03             |
| Ethnicity (Kinh)            | Dummy, 1 if the respondent is of Kinh ethnicity, 0 otherwise.   | 3,010 | 0.95  | -    | 0    | 1    | 0.94                                | 0.97   | -0.03***         |
| Religion: Buddhist          | Dummy, 1 if the respondent is Buddhist, 0 otherwise.  | 3,010 | 0.18  | -    | 0    | 1    | 0.11                                | 0.24   | -0.13***         |
| Religion: Christian         | Dummy, 1 if the respondent is Christian, 0 otherwise.   | 3,010 | 0.06  | -    | 0    | 1    | 0.02                                | 0.09   | -0.07***         |
| Religion: None              | Dummy, 1 if the respondent has no religious affiliation, 0 otherwise.   | 3,010 | 0.76  | -    | 0    | 1    | 0.87                                | 0.65   | 0.22***          |
| Religion: Other             | Dummy, 1 if the respondent has another religious affiliation, 0 otherwise.  | 3,010 | 0.01  | -    | 0    | 1    | 0.00                                | 0.02   | -0.01***         |
| Study: Computer sciences    | Dummy, 1 if the respondent's current field of studies is computer science, 0 otherwise.   | 3,010 | 0.21  | -    | 0    | 1    | 0.15                                | 0.26   | -0.11***         |
| Study: Agriculture          | Dummy, 1 if the respondent's current field of studies is agriculture, 0 otherwise.  | 3,010 | 0.07  | -    | 0    | 1    | 0.12                                | 0.02   | 0.10***          |
| Study: Law/economics        | Dummy, 1 if the respondent's current field of studies is law/economics, 0 otherwise.  | 3,010 | 0.46  | -    | 0    | 1    | 0.46                                | 0.45   | 0.02             |
| Study: Engineering          | Dummy, 1 if the respondent's current field of studies is engineering, 0 otherwise.  | 3,010 | 0.11  | -    | 0    | 1    | 0.13                                | 0.08   | 0.05***          |
| Study: Others               | Dummy, 1 if the respondent has another field of studies.  | 3,010 | 0.17  | -    | 0    | 1    | 0.13                                | 0.20   | 0.07***          |
| Years of study              | Respondent's total years of study.  | 3,010 | 14.25 | 1.00 | 12   | 18   | 14.32                               | 14.19  | 0.13***          |
| Close family self-employed  | Dummy, 1 if a parent or close family member of the respondent is self-employed, 0 otherwise.  | 3,010 | 0.49  | -    | 0    | 1    | 0.49                                | 0.50   | -0.01            |
| Risk-taking                 | Respondent's willingness to take risk on a ten-point-scale ranging from 0 ("highly risk-averse") to 10 ("fully prepared to take risk")                              | 3,010 | 6.49  | 2.25 | 0    | 10   | 6.49                                | 6.49   | -0.01            |

Notes: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.10. Values do not always add up to 1.00 due to rounding.



**Table 2.** Correlations.

| Variable                        | (1)    | (2)             | (3)    | (4)   | (5)    | (6)    | (7)    | (8)    | (9)    | (10)  | (11)   | (12)   | (13)   | (14)  | (15) | (16) | VIF   |
|---------------------------------|--------|-----------------|--------|-------|--------|--------|--------|--------|--------|-------|--------|--------|--------|-------|------|------|-------|
| <i>Independent variable</i>     |        |                 |        |       |        |        |        |        |        |       |        |        |        |       |      |      |       |
| (1) Origin: North Vietnam       |        |                 |        |       |        |        |        |        |        |       |        |        |        |       |      |      | 1.15  |
| <i>Dependent variables</i>      |        |                 |        |       |        |        |        |        |        |       |        |        |        |       |      |      |       |
| (2) Entrepreneurship intention  | -0.08* |                 |        |       |        |        |        |        |        |       |        |        |        |       |      |      | 1.05  |
| (3) Entrepreneurship course     | -0.10* | 0.04            |        |       |        |        |        |        |        |       |        |        |        |       |      |      | 1.04  |
| (4) Startup vs. takeover        | -0.05  | -. <sup>a</sup> | -0.01  |       |        |        |        |        |        |       |        |        |        |       |      |      | 1.04  |
| <i>Controls</i>                 |        |                 |        |       |        |        |        |        |        |       |        |        |        |       |      |      |       |
| (5) Age                         | 0.04   | 0.00            | 0.00   | 0.01  |        |        |        |        |        |       |        |        |        |       |      |      | 5.84  |
| (6) Gender                      | -0.03  | 0.07*           | -0.09* | 0.02  | 0.14*  |        |        |        |        |       |        |        |        |       |      |      | 1.53  |
| (7) Ethnicity (Kinh)            | -0.06* | 0.01            | 0.01   | 0.01  | -0.03  | 0.04   |        |        |        |       |        |        |        |       |      |      | 1.08  |
| (8) Religion: Buddhist          | -0.17* | 0.03            | 0.06*  | 0.01  | -0.05* | 0.02   | 0.07*  |        |        |       |        |        |        |       |      |      | 16.29 |
| (9) Religion: Christian         | -0.15* | 0.05*           | 0.04   | 0.01  | 0.01   | -0.03  | -0.06* | -0.11* |        |       |        |        |        |       |      |      | 6.70  |
| (10) Religion: None             | 0.25*  | -0.06*          | -0.08* | -0.02 | 0.04   | 0.00   | 0.00   | -0.81* | -0.44* |       |        |        |        |       |      |      | 19.97 |
| (11) Study: Computer sciences   | -0.13* | 0.05*           | -0.07* | -0.04 | -0.10* | 0.41*  | 0.10*  | 0.05   | 0.02   | -0.04 |        |        |        |       |      |      | 2.24  |
| (12) Study: Agriculture         | 0.21*  | 0.02            | 0.02   | -0.01 | 0.13*  | -0.02  | -0.06* | -0.01  | -0.03  | 0.03  | -0.14* |        |        |       |      |      | 1.40  |
| (13) Study: Law/economics       | 0.02   | -0.06*          | 0.10*  | 0.04  | -0.18* | -0.38* | 0.03   | -0.01  | -0.02  | 0.02  | -0.46* | -0.24* |        |       |      |      | 2.13  |
| (14) Study: Engineering         | 0.08*  | 0.01            | -0.09* | -0.04 | 0.25*  | 0.31*  | 0.06*  | -0.06* | -0.03  | 0.07* | -0.18* | -0.09* | -0.32* |       |      |      | 1.83  |
| (15) Years of study             | 0.06*  | -0.01           | -0.01  | 0.00  | 0.91*  | 0.11*  | 0.01   | -0.04  | 0.01   | 0.03  | -0.12* | 0.14*  | -0.17* | 0.28* |      |      | 5.93  |
| (16) Close family self-employed | -0.01  | 0.10*           | 0.07*  | 0.16* | 0.01   | -0.02  | 0.08*  | 0.05*  | -0.02  | -0.03 | -0.01  | 0.03   | 0.03   | -0.04 | 0.04 |      | 1.03  |
| (17) Risk-taking                | 0.00   | 0.17*           | 0.04   | -0.04 | 0.01   | 0.12*  | -0.04  | 0.01   | 0.00   | 0.00  | 0.05*  | 0.01   | -0.07* | 0.04  | 0.00 | 0.04 | 1.05  |

Notes: <sup>a</sup> = the takeover vs. new venture startup group only consists of individuals with entrepreneurship intention = 1. \*\*\* p < 0.01

**Table 3.** Main analysis on the influence of socialist heritage on entrepreneurship outcomes.

| <b>Model</b>                 | <b>(1a)</b>                        | <b>(1b)</b>                        | <b>(2a)</b>                           | <b>(2b)</b>                           | <b>(3a)</b>                                    | <b>(3b)</b>                            |
|------------------------------|------------------------------------|------------------------------------|---------------------------------------|---------------------------------------|--|--|
| <i>Hypothesis</i>            | <i>H1</i>                          | <i>H1</i>                          | <i>H2</i>                             | <i>H2</i>                             | <i>H3</i>                                      |  |
| Method                       | Logistic regression                | Logistic regression                | Logistic regression                   | Logistic regression                   | Multinomial logistic regression                |  |
| Dependent variable           | Entrepreneurship intention         | Entrepreneurship intention         | Entrepreneurship course at university | Entrepreneurship course at university | (1) Employee vs. (2) new venture startup       | (1) Employee vs. (3) business takeover |
| <i>Sample</i>                | <i>Full sample</i>                 | <i>Full sample</i>                 | <i>Full sample</i>                    | <i>Full sample</i>                    | <i>Individuals with close family member SE</i> |  |
| <b>Origin: North Vietnam</b> | <b>-0.337</b><br><b>(0.074)***</b> | <b>-0.311</b><br><b>(0.080)***</b> | <b>-0.389</b><br><b>(0.075)***</b>    | <b>-0.399</b><br><b>(0.081)***</b>    | <b>-0.403</b><br><b>(0.118)***</b>             | <b>-0.920</b><br><b>(0.251)***</b>     |
| Age                          |                                    | 0.049<br>(0.082)                   |                                       | 0.059<br>(0.081)                      | -0.057<br>(0.130)                              | 0.188<br>(0.196)                       |
| Gender                       |                                    | 0.172<br>(0.095)*                  |                                       | -0.202<br>(0.094)**                   | 0.089<br>(0.140)                               | 0.911<br>(0.252)***                    |
| Ethnicity: Kinh              |                                    | 0.048<br>(0.185)                   |                                       | 0.073<br>(0.186)                      | -0.214<br>(0.340)                              | 0.106<br>(0.787)                       |
| Religion: Buddhist           |                                    | -0.116<br>(0.410)                  |                                       | 0.178<br>(0.403)                      | 0.189<br>(0.749)                               | 0.018<br>(1.129)                       |
| Religion: Christian          |                                    | 0.231<br>(0.429)                   |                                       | 0.185<br>(0.422)                      | 1.003<br>(0.788)                               | 1.051<br>(1.186)                       |
| Religion: None               |                                    | -0.202<br>(0.403)                  |                                       | -0.112<br>(0.395)                     | 0.218<br>(0.741)                               | 0.023<br>(1.109)                       |
| Study: Computer sciences     |                                    | 0.038<br>(0.144)                   |                                       | -0.123<br>(0.139)                     | -0.037<br>(0.215)                              | -1.199<br>(0.420)***                   |
| Study: Agriculture           |                                    | 0.253<br>(0.181)                   |                                       | 0.452<br>(0.181)**                    | 0.267<br>(0.258)                               | -0.387<br>(0.596)                      |
| Study: Law/economics         |                                    | -0.106<br>(0.111)                  |                                       | 0.355<br>(0.111)***                   | -0.130<br>(0.167)                              | -0.124<br>(0.327)                      |
| Study: Engineering           |                                    | 0.027<br>(0.166)                   |                                       | -0.257<br>(0.164)                     | -0.184<br>(0.247)                              | -1.147<br>(0.540)**                    |
| Years of study               |                                    | -0.098<br>(0.096)                  |                                       | -0.022<br>(0.095)                     | 0.080<br>(0.150)                               | -0.184<br>(0.236)                      |
| Close family self-employed   |                                    | 0.389<br>(0.076)***                |                                       | 0.259<br>(0.076)***                   | -<br>-   | -<br>-                                 |
| Risk-taking                  |                                    | 0.144<br>(0.017)***                |                                       | 0.047<br>(0.017)***                   | 0.155<br>(0.026)***                            | 0.054<br>(0.055)                       |
| Pseudo R2                    | 0.005                              | 0.037                              | 0.007                                 | 0.030                                 | 0.037  |  |
| Log Likelihood               | -2060.678                          | -1995.131                          | -2014.932                             | -1968.220                             | -1,248.225                                     |  |
| Obs.                         | 3,010                              | 3,010                              | 3,010                                 | 3,010                                 | 1,489  |  |

Notes: Logits are displayed with robust standard errors in parentheses. Reference categories: Religion: Other, Study: Other. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.10.

**Table 4.** Further analyses and robustness checks.

| Model   | (1a)                              | (1b)                             | (2a)   | (2b)   | (3a)                                   | (3b)                                   | (4a)                       | (4b)                       |
|---|-----------------------------------|----------------------------------|--|--|--|--|----------------------------|----------------------------|
| Method  | Logistic regression               | Logistic regression              | Logistic regression                          | Logistic regression                          | Multinomial logistic regression        | Logistic regression                    | Logistic regression        | Logistic regression        |
| Dependent variable  | Takeover vs. new venture          | Takeover vs. new venture         | Takeover vs. new venture                     | Takeover vs. new venture                     | (1) Employee vs. (2) new venture       | (1) Employee vs. (3) takeover          | Entrepreneurship intention | Entrepreneurship intention |
| Sample  | Individuals with EI               | Individuals with EI              | Individuals with EI + close family member SE | Individuals with EI + close family member SE | Full sample                            | Full sample                            | Full sample                | Full sample                |
| <b>Origin: North Vietnam</b>  | <b>-0.407</b><br><b>(0.206)**</b> | <b>-0.393</b><br><b>(0.221)*</b> | <b>-0.567</b><br><b>(0.236)**</b>            | <b>-0.523</b><br><b>(0.247)**</b>            | <b>-0.288</b><br><b>(0.081)**</b><br>* | <b>-0.701</b><br><b>(0.222)**</b><br>* | -                          | -                          |
| Age   |                                   | 0.185<br>(0.181)                 |  | 0.355<br>(0.244)                             | 0.038<br>(0.084)                       | 0.165<br>(0.161)                       |                            | 0.045<br>(0.082)           |
| Gender  |                                   | 0.680<br>(0.226)***              |  | 0.864<br>(0.249)***                          | 0.128<br>(0.097)                       | 0.777<br>(0.224)***                    |                            | 0.171<br>(0.095)*          |
| Ethnicity: Kinh   |                                   | -0.029<br>(0.547)                |  | 0.231<br>(0.781)                             | 0.042<br>(0.187)                       | 0.016<br>(0.551)                       |                            | 0.051<br>(0.185)           |
| Religion: Buddhist  |                                   | 0.386<br>(0.959)                 |  | 0.273<br>(0.995)                             | -0.128<br>(0.412)                      | 0.120<br>(1.061)                       |                            | -0.134<br>(0.412)          |
| Religion: Christian   |                                   | 0.527<br>(0.996)                 |  | 0.458<br>(1.040)                             | 0.204<br>(0.431)                       | 0.695<br>(1.091)                       |                            | 0.215<br>(0.431)           |
| Religion: None  |                                   | 0.367<br>(0.941)                 |  | 0.225<br>(0.972)                             | -0.217<br>(0.404)                      | 0.055<br>(1.045)                       |                            | -0.224<br>(0.405)          |
| Study: Comp. sciences   |                                   | -0.955<br>(0.367)***             |  | -1.212<br>(0.420)***                         | 0.098<br>(0.146)                       | -0.858<br>(0.362)**                    |                            | 0.028<br>(0.144)           |
| Study: Agriculture  |                                   | -0.316<br>(0.463)                |  | -0.722<br>(0.562)                            | 0.273<br>(0.183)                       | -0.015<br>(0.472)                      |                            | 0.253<br>(0.181)           |
| Study: Law/economics  |                                   | -0.117<br>(0.281)                |  | -0.020<br>(0.326)                            | -0.099<br>(0.113)                      | -0.190<br>(0.281)                      |                            | -0.113<br>(0.111)          |
| Study: Engineering  |                                   | -1.009<br>(0.473)**              |  | -0.969<br>(0.544)*                           | 0.088<br>(0.168)                       | -0.964<br>(0.470)**                    |                            | 0.016<br>(0.166)           |
| Years of study  |                                   | 1.561<br>(0.272)***              |  | -0.390<br>(0.286)                            | -0.085<br>(0.098)                      | -0.208<br>(0.194)                      |                            | -0.091<br>(0.096)          |
| Close family SE   |                                   | -0.204<br>(0.214)                |  | -<br>(0.077)***                              | 0.304<br>(0.269)***                    | 1.874<br>(0.269)***                    |                            | -<br>(0.017)***            |
| Risk-taking   |                                   | -0.079<br>(0.047)*               |  | -0.099<br>(0.051)*                           | 0.149<br>(0.018)***                    | 0.065<br>(0.050)                       |                            | 0.144<br>(0.017)***        |
| Origin: North Vietnam = 0,<br>close family member SE = 1                |                                   |                                  |  |  |  |  | 0.504<br>(0.104)***        | 0.499<br>(0.107)***        |
| Origin: North Vietnam = 1,<br>close family member SE = 0                |                                   |                                  |  |  |  |  | -0.229<br>(0.103)**        | -0.203<br>(0.108)*         |
| Origin: North Vietnam = 1,<br>close family member SE = 0                |                                   |                                  |  |  |  |  | 0.051<br>(0.104)           | 0.073<br>(0.110)           |
| <i>Reference: Origin: North Vietnam = 0, close family member SE = 0</i> |                                   |                                  |  |  |  |  |                            |                            |
| Pseudo R2   | 0.005                             | 0.082                            | 0.032  | 0.074  | 0.044                                  | 0.012                                  |                            | 0.037                      |
| Log Likelihood  | -399.892                          | -369.025                         | -260.110                                     | -248.771                                     | -2,363.622                             | -2,045.342                             |                            | -1,994.041                 |
| Obs.  | 1,656                             | 1,656                            | 688  | 688  | 3,010                                  | 3,010                                  |                            | 3,010                      |

Notes: Logistic regression analysis. Logits are displayed with robust standard errors in parentheses. EI = entrepreneurship intentions, SE = self-employed. Reference categories: Ethnicity: Other, Religion: Other, Study: Other. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.10.

## Appendix

**Table A1.** Universities included in our study.

| No. | University                                  | Obs. | Region | City   | Approx. number of students (2018) |
|-----|---|------|--------|--------|-----------------------------------|
| 1   | Academy of Finance                          | 141  | North  | Hanoi  | 20,000                            |
| 2   | Academy of Journalism and Communication     | 120  | North  | Hanoi  | 10,000                            |
| 3   | Foreign Trade University (Hanoi)            | 97   | North  | Hanoi  | 12,000                            |
| 4   | Hanoi University of Science and Technology  | 128  | North  | Hanoi  | 30,000                            |
| 5   | National Economics University               | 80   | North  | Hanoi  | 45,000                            |
| 6   | University of Transport Technology          | 396  | North  | Hanoi  | 21,000                            |
| 7   | Vietnam National University (Hanoi)         | 35   | North  | Hanoi  | 37,403                            |
| 8   | Vietnam National University of Forestry     | 244  | North  | Hanoi  | 10,445                            |
| 9   | Vietnam National University of Agriculture  | 195  | North  | Hanoi  | 30,360                            |
| 10  | Banking Academy                             | 58   | North  | Hanoi  | 15,700                            |
| 11  | Dalat University                            | 526  | South  | Dalat  | 12,500                            |
| 12  | Duytan University                           | 265  | South  | Danang | 19,600                            |
| 13  | University of Economics HCMC                | 32   | South  | HCMC   | 46,000                            |
| 14  | HCMC University of Food Industry            | 107  | South  | HCMC   | 14,000                            |
| 15  | University of Finance and Marketing         | 195  | South  | HCMC   | 20,000                            |
| 16  | HCMC University of Technology and Education | 206  | South  | HCMC   | 20,396                            |
| 17  | HCMC University of Transport                | 147  | South  | HCMC   | 18,000                            |
| 18  | Hutech University                           | 161  | South  | HCMC   | 12,000                            |
| 19  | University of Economics and Law             | 139  | South  | HCMC   | 9,000                             |
| 20  | HCMC Medicine and Pharmacy University       | 69   | South  | HCMC   | 8,500                             |
| 21  | Ton Duc Thang University                    | 44   | South  | HCMC   | 23,286                            |

*Notes:* All surveys were collected in September and October 2018. HCMC = Ho Chi Minh City.

## List of research reports

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